FIRE BOMB

LET'S TAKE a closer look at the most feared weapon used by the U. S. in the Korean war—the searing napalm fire bomb.

Pilot after pilot returning from the war zone has said he'd rather have a couple of droppable gasoline tanks full of napalm than any other weapon, bombs, rockets or guns. Reports of devastation caused by fire bombs say it is effective against almost any target—troops, tanks, buildings and even railroad tunnels. Enemy troops fear it more than anything thrown at them, according to prisoners of war.

Napalm isn't a new weapon—it was used with terrific success against the Japanese dug into caves on Peleliu, Iwo Jima and Okinawa. The Air Force dropped many thousands of napalm bombs on Japan to burn out its cities.

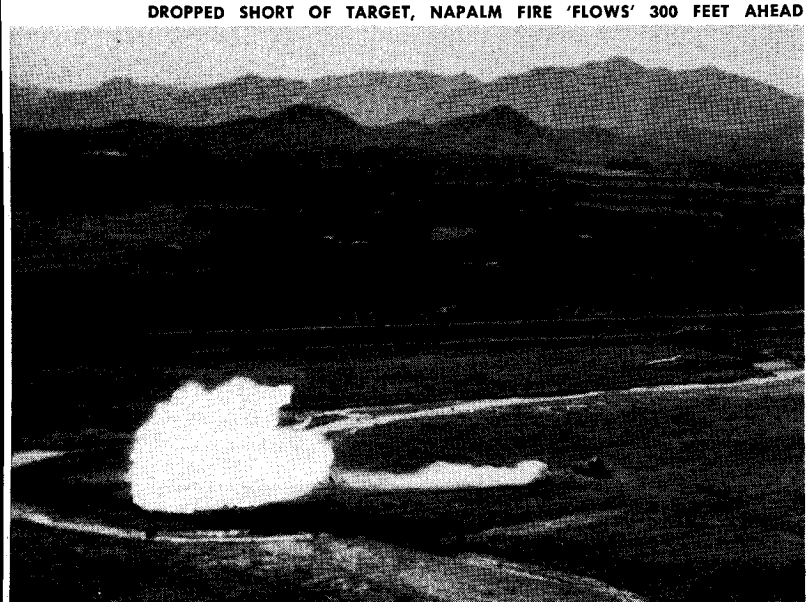
Flame throwers used by ground troops use a thinner version of the same jellied gasoline to destroy enemy gun emplacements, bunkers and cave hideouts. But in the Korean war it really reached its peak of popularity with the United Nations forces.

Napalm is well known as a weapon, but few know just what is in it besides gasoline. Early attempts in World War II to use flame as a weapon saw fuel oil mixtures used. Rubber was tried as a thickening agent, then the Japs cut off the rubber supply. It was found a mixture of aluminum naphthenate and aluminum soaps of coconut fatty acids was best as a jelling agent. Hence the name "nap" for the naphthenic acids and "palm" for the coconut acids contained in the "devil's brew."

It is an off-white granular powder. Newest formulas call for about 65% oleic acid, 30% coconut fatty acids and 5% naphthenic acid. Napalm gels are made by stirring gasoline while napalm powder is added slowly. But more on that later, let's look at the combat record over in Korea.

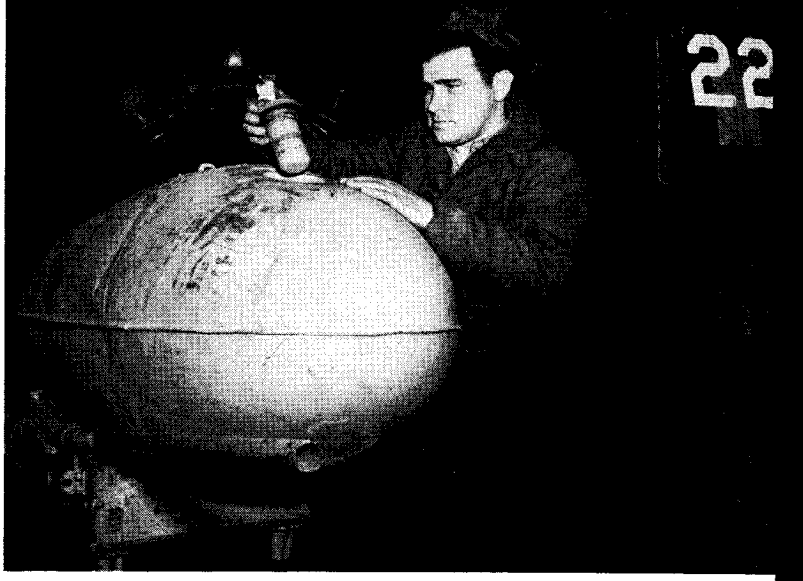
The night before a strike, crewmen aboard a carrier mix the napalm and give it time to thicken overnight. The sticky, syrupy liquid is pumped into belly tanks of planes. Contact detonation fuses are installed in the mouth of the tank. A full 165-gallon tank weighs 1500 pounds and *Corsairs* usually take them off in pairs, not a bad load for a fighter—in fact, it's really very good.

DROPPED SHORT OF TARGET, NAPALM FIRE 'FLOWS' 300 FEET AHEAD



CAPTURED KOREAN T-34 TANK IS TESTED WITH NAPALM: NOTE PLANE

SOUTH KOREAN LABORER FUNNELS NAPALM POWDER INTO GASOLINE TANK



NAVY ORDNANCEMAN JEROME OZDYCK, INSTALLS IGNITER ABOARD SICILY

Finding a target, the carrier pilot drops his napalm bomb. It explodes on contact and burns anything it touches. It burns oxygen from the air so fast that persons within 30 feet of the fire often suffocate. Forward air controllers with the Marines reported the enemy would stay "holed up" when rockets or bombs were fired at them, but they broke and ran when they saw napalm coming down from the much-feared "blue airplanes". It has a similar deadly effect on tanks, suffocating the crew inside even if it doesn't burn them.

LCdr. Elwin A. Parker, a *Princeton* pilot, decided to assess napalm damage. After some Skyraiders fire-bombed a village harboring Communist troops, he went in to look around. He found many Reds dead without a mark on them. The napalm burned so furiously it took all the oxygen out of the air and the Communists simply were suffocated.

RED TANKMEN weren't afraid of diving planes at first, their tough armor would repel 20 mm fire, it was hard to hit the maneuvering tank with rockets and bombs had to be right on to kill a tank. Napalm was another story. Pilots drop the fire bombs short from low altitude, let it skip to the target. Accuracy is not at premium. A napalm bomb will cover a pear-shaped area 275 feet long and 80 feet wide. A solid sheet of 1500-degree fire envelops everything, killing personnel, exploding ammunition. It is not a flash fire like gasoline alone would be, but clings and burns and burns.

Skyraiders and *Corsairs* caught a column of 280 trucks racing reinforcements to beleaguered Communists. So much napalm and high explosives were poured on them only 50 trucks escaped when darkness came. A flight of *Corsairs* led by LCol. N. J. Anderson sighted Red Koreans changing from uniforms to white civilian clothes in the Seoul rout. Napalm on the first pass cleaned out two large groups. As fast as the Reds moved in tanks to stop the retreat, napalm was dropped on them. They ran out of tanks and later phases of the war have seen far fewer Communist tanks in action.

Marines of the *Blacksheep* squadron saw enemy troops hiding in caves in a deep canyon. Maj. Kenneth Ruesser, the strike leader, got permission to give them the napalm treatment. He and Capt. Charles Graber flew into the canyon. Their planes were so low the napalm bomb fuse would not arm (it's supposed to take about 150 feet of air travel), so Ruesser dropped his bomb and Graber ignited it with tracer fire strafing.

Navy carrier pilots used napalm the same way as Marines or Air Force pilots. Particularly against ground troops on the march on mountain roads was napalm effective. Communists soon began moving their troops and convoys at night.

Although it was useful against anti-aircraft emplacements, bombs with VT fuses probably proved a better weapon. Ammunition dumps were "duck soup" for napalm, the huge flames sending almost everything up in a burst that made bombing planes keep a respectful distance.

Wooden warehouses and thatched-hut villages, common in Korea, were made to order for fire bombs, as were Japan's wooden cities. Orders often went out to burn down a town known to be full of Red troops hiding in huts.

ONE OF the standing rules of the fleet has been not to bring a napalm-filled belly tank back from a mission. Pilots either jettisoned them if they failed to find targets, landed at some shore airstrip and got rid of the bombs, or else were supposed to bail out and lose their plane. So far as could be learned, no pilots had to resort to the latter

CLINGING NAPALM STILL BURNS AS SMOKE MUSHROOMS OVER THE TANK

NOTE SEARED AREA AROUND TANK: CLOSE-UP OF TANK ON FACING PAGE

FIRE BOMB DROPPED IN REAR OF KOREAN BUILDING FLAMES UP: BLOWS OUT FRONT ENTRANCE

measure. Landing in the arresting gear and the resulting jolting might set off the impact fuses.

During snowy weather off Korea, carriers had some difficulty getting the powder to mix with the gasoline, but methods of warming the chemicals were worked out to solve that problem.

Although napalm bombers usually operate from 200 to 2,000 feet altitude, there are few reports of ground troops setting off the tanks. At least one Air Force F-51 was reported to have had that happen to it, but the pilot managed to drop his bomb and save the plane.

The pilot credited with dropping the first napalm bomb in Korea is Capt. Richard E. Smith of the 8th Fighter-Bomber Wing. He field-assembled some bombs soon after the 38th parallel had been crossed by the Reds last summer and fired them with a hand grenade for an igniter.

So popular did the napalm bomb become that the Navy soon was dropping one napalm tank for every four regular bombs, and the Air Force used up 2,000,000 pounds of napalm powder the first five months of the war.

Since a belly tank takes anywhere from 9 to 21 pounds of powder, depending on the consistency required, that figure could mean the Air Force could brew enough jellied gasoline for 100,000 fire bombs.

The largest fire bomb raid of the Korean was on 10 November when FEAF bomber command dropped 85,000 incendiary bombs on military targets of the key North Korean communications and supply hub of Sinuiju.

Pilots like to catch trains with napalm bombs. By catching one on a curve and dropping the bomb on the inside radius of the curve next to the train, more damage can be inflicted than with a dozen strafing runs.

A COUPLE of Marine pilots last fall played a cat-and-mouse game with a freight train near Wonsan. The engineer pulled his train into a tunnel before the planes could napalm it. Each time he would try to pull out they would strafe it. Finally they flew over a hill and the train pulled completely out of the tunnel. The harassing planes zipped back. One pilot hit three cars back of the engine with his napalm and the other hit the tail end of the train. The result was one less train.

Another war story involves Marine pilots who saw enemy troops rushing into a railroad tunnel to hide. The tunnel was a short one. Dropping the napalm in the mouth of the tunnel, one pilot saw the flames spurt out the other end of it, obviously taking care of the occupants.

Two Marine fighter-bomber pilots even shut down a Communist radio station with a well-placed napalm bomb.

In a small enemy-occupied village west of Hoengsong, 1st Lt. Elwin M. Jones and M/Sgt. Leo J. Ihli strafed and rocketed about 100 Chinese troops.

Then they saw a radio transmitter on a building. They scored a direct hit on it with a napalm bomb.

North Koreans often dig in behind a

BARRELS OF NAPALM SET ASIDE TO JELL AT AN AIRBASE IN KOREA AS WORKERS FILL REMAINDER

NAPALM IS USED IN FLAME THROWERS LIKE THIS

VAST EXPANSE COVERED BY NAPALM FLAMES IS DEMONSTRATED IN THIS WW II SHOT OF CORSAIR BURNING OUT JAPS HIDING IN PELELIU CAVES

hilltop but napalm with its widespread fire has proved one weapon the Marines, with their close air support technique, have found to be the answer. Heat generated in the wide area by such a bomb kills personnel exposed to it.

Demoralizing effects of fire bombing were demonstrated when four F-51's spotted several groups of 50 or more North Koreans along a ridge. A couple of napalm bombs chased them into nearby buildings. As they came in for another bombing run, the pilots saw white flags flying from the houses.

The planes radioed to ground troops and the Koreans were captured, while planes buzzed overhead to see everything went right. Another pilot reported he similarly captured 12 North Koreans by threatening them with napalm while flying at 250 mph, without firing a shot.

Moisture is the greatest problem in mixing napalm. High humidity of summer months makes storage difficult because the powder has an affinity for water. Another problem is deterioration of the soap on storage due to oxidation, and lack of uniformity of napalm made by different manufacturers.

TEMPERATURE affects the rate of jelling. The initial appearance is like applesauce but after 24 hours aging it gets sticky and stringy. Percentage of napalm varies from 6 to 13%. Water in the gasoline also affects the napalm mixture. To get a gel of lower viscosity and greater stringiness, cresole or xylenols are sometimes added, particularly for cold weather operations.

Flame throwers were little used in World War I, but the U. S. found them effective at Guadalcanal. Fire is both a casualty weapon and a psychological weapon. Men seem to have inherent fear of fire. Japs would abandon positions in which they fought to the death against other weapons.

Fire bombs got their start when pilots dropped partially-filled gasoline tanks and then ignited them with tracers. During World War II, the United States tried to develop an aircraft-mounted flame thrower. A 200-gallon tank was installed in the bomb bay of a light bomber which was to swoop down and spray ground troops. During the discharge, the rear end of the plane seemed to be in flames. Although most of the fuel got to the ground while still burning, the idea was abandoned for the fire bomb. The dropping plane was not so exposed to ground fire when using napalm in tanks.

Incendiary bombs of the last war included the famous six-pound M69 filled with napalm. Three quarters of a million clusters of these bombs, 36 to a cluster, were dropped on Jap cities. About 60% of every city given this fire bomb treatment was destroyed. Korean cities are of much the same construction.

So, the story of napalm is still being written in Korea. It is a cheap, effective weapon of multiple uses, popular with the Navy, Marines and Air Force alike. Our troops are glad the Communists are not using it against them.

SPEED IS ESSENCE AS MARINES PUMP NAPALM INTO TANK OF CORSAIR, LOADED WITH ROCKETS